

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
7 April 2005 (07.04.2005)

PCT

(10) International Publication Number
WO 2005/030599 A1

(51) International Patent Classification⁷: B65D 33/06, 30/16, B65B 61/14, B31B 1/86

(21) International Application Number:
PCT/SE2004/001386

(22) International Filing Date:
29 September 2004 (29.09.2004)

(25) Filing Language: Swedish

(26) Publication Language: English

(30) Priority Data:
0302633-3 2 October 2003 (02.10.2003) SE

(71) Applicant (for all designated States except US):
ECO LEAN RESEARCH & DEVELOPMENT
A/S [DK/DK]; Holbergsgade 14, 2 sal tv, DK-1057
København (DK).

(72) Inventor; and

(75) Inventor/Applicant (for US only): FORSS, Stefan
[SE/SE]; Pilgatan 9, S-253 73 Helsingborg (SE).

(74) Agent: AWAPATENT AB; Box 5117, S-200 71 Malmö
(SE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

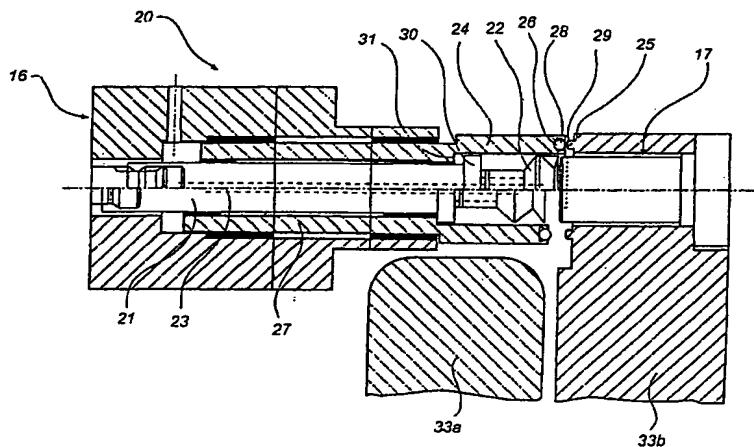
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE.

[Continued on next page]

(54) Title: METHOD AND DEVICE FOR GAS FILLING AND SEALING OF A DUCT INTENDED TO BE FILLED WITH GAS AND POSITIONED IN A CONTAINER OF A COLLAPSIBLE TYPE, AND CONTAINER BLANK COMPRISING SUCH A DUCT



Best Available Copy

(57) Abstract: The invention relates to a method and a device (16) for gas filling and sealing of a duct (7) intended to be filled with gas and positioned in a container (1) of a collapsible type. The duct (7) is defined by two opposite side walls (2) which are joined along a connecting portion (4) and comprises an inlet (15) arranged in one of the side walls (2). A part of the container (1) that comprises the inlet (15) is clamped between an abutment (17) and a gas module (20) which is axially movable towards the abutment (17). Clamping occurs in such a manner that one of the two side walls (2) included in the duct (7) is allowed, in response to a gas flow supplied from the gas module (20) and entering the duct (7) through said inlet (15), to bulge to form a free passage into the duct (7) for filling the same with gas. After completion of the gas filling, the duct (7) is sealed. The invention also relates to a container blank (10) having a duct (7) which is specially developed for the method and the device (16).

WO 2005/030599 A1



EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM,
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM,
ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA,
SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE,
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,

IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG)

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.